

10 to 14 days this results in severe depression, mental irritability, and an uncomfortable feeling about the heart. Passing on now to the commoner condition of hyperfunction of the thyroid gland, Graves's disease naturally occurred to the mind. The following case is of extreme interest. A man, aged 57, had complained of weakness of the legs for several months. He could no longer walk to his work and had lost 3 st. in weight. The pulse was small and the rate 120 to 150. There were no heart murmurs or signs of dilatation. There was no albumin, blood, or sugar in the urine. No exophthalmos was present. There were marked tremors in both hands. There was a large bilateral swelling of the thyroid gland which had been existing for 14 years. On its first appearance, by the advice of his medical attendant, he had painted it with iodine, and this had been followed by some reduction in size. It then transpired that six months prior to consulting the President there were indications of the gland again enlarging, and of his own accord he had resorted to painting with tincture of iodine. The history and symptoms led to a diagnosis of hyperthyroidism, induced by the absorption of iodine in an apparently simple goitre. With cessation of painting, rest in bed, liberal diet, and a course of iron strength and weight were gradually regained. In four months he returned to work, weighing 13½ st., and in all respects quite well. Eight months later he complained of being worried by the consciousness of a missing beat in his pulse. On examination the pulse was 44, feeble, of low tension, and missing a beat at irregular intervals. He remained in bed 14 days without any improvement. The condition was considered to be one of thyroid exhaustion, but in view of his previous hyperthyroidism it was considered best not to attempt stimulation of the gland by iodine or to give thyroid extract. It was decided to try potassium iodide. This was given in 3 gr. doses thrice daily. In ten days his appetite had gone, he was losing weight rapidly, and his pulse was 125. Rest in bed and an iodine-free diet was ordered and improvement again set in. The most interesting feature of this case is the relation of the symptoms of hyperthyroidism to the administration of iodine. The richness of the thyroid in iodine is well known, but its actual rôle is not established. It is impossible altogether to escape from the suspicion that treatment with thyroid preparation may after all only be a mode of treatment with organically combined iodine in an easily assimilable form.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—

A clinical meeting of this society was held at the West London Hospital on Nov. 5th, Dr. Leonard Dobson, the President, being in the chair. The following cases were shown:—Mr. O. L. Addison: (1) Epithelioma of the Tongue 11 years after operation; (2) Lymphadenoma; and (3) Acute Osteomyelitis of Femur: result.—Major McAdam Eccles: 1. Caput Medusæ; obvious enlargement of the right superficial circumflex iliac vein, right superficial epigastric vein, and left superficial epigastric vein, probably caused by blockage of inferior vena cava. 2. Tuberculous Sinus from disease of left elbow-joint; very distinct improvement under treatment with Simpson light.—Mr. N. Bishop Harman: Congenital Absence of the Iris Sphincters on both sides.—Dr. T. Grainger Stewart: (1) Cerebral Diplegia; (2) Friedreich's Disease; and (3) Progressive Tonic Spasms of Arms and Legs, cerebral origin.—Dr. George Arthur: An unusual Deformity of the Left Shoulder in a female child aged 7 years.—Dr. Sydney Owen: 1. Progressive loss of power and wasting in lower extremities; progressive muscular atrophy commencing in lower extremities. 2. Tubercle bacilli in cerebro-spinal fluid; repeated lumbar puncture (87 times), tuberculin injections (32); arrest of condition. 3. Intracranial Tumour, subtentorial? metastatic.—Mr. H. S. Souttar: Tabes with gastric crises (female aged 24 years); operation by division of right anterolateral tract of cord between second and third dorsal roots.—Dr. Reginald Morton showed skiagrams of (1) an unusual deformity of the left shoulder (Dr. George Arthur's case); and (2) a large aneurysm of the arch of the aorta (case under the care of Dr. Arthur Saunders).—Dr. Alastair MacGregor gave a short description of the Simpson Light Apparatus and records of some cases treated by this method.—The President, Major McAdam Eccles, Mr. Addison, Dr. Morton, Dr. Stewart, Mr. Souttar, and Mr. W. P. Mallam took part in the discussion on the various cases.

Reviews and Notices of Books.

Principles of General Physiology.

By WILLIAM MADDOCK BAYLISS, M.A., D.Sc., F.R.S., Professor of General Physiology in University College, London. With 259 illustrations. London: Longmans, Green, and Co. 1915. Pp. 850. Price 21s. net.

EVERY physiologist and perhaps also members of a larger public will welcome Professor Bayliss's "Principles of General Physiology," which is dedicated to his "Fellow Worker, E. H. S." By general physiology the author understands what Burdon-Sanderson defined as "the study of the endowments of living material," a view practically identical with the "Physiologie Générale" of Claude Bernard, who, however, was not professor in the University of Paris, as stated in the preface, but in the Collège de France, founded by François I. (1530). On the part of the reader an elementary knowledge of physics, chemistry, and biology is assumed. We are glad that a rather full exposition is given of such subjects as catalysis, tension of gases, and some laws of hydrodynamics, with which many medical and other students are apt to be somewhat unfamiliar. The author eschews definitions of vitalism—what is meant by "vital" and by "life" itself. He defines his position when he states that "all we are justified in stating is that, up to the present, no physico-chemical system has been met with having the same properties as those known as vital; in other words, none have as yet been prepared of similar complexity and internal coördination." The author's object is to discuss the physical and chemical processes which intervene in the life processes so far as they are known. Vesalius himself stated that the simplest experiment on the living animal, as a rule, revealed more than a long study on the dead body.

The scope of the work is best presented by enumerating some of the titles of the 24 chapters into which the contents are divided—Protoplasm, Energetics, Colloidal State, Osmotic Pressure, Electrolytes and their Action, Catalysis and Enzymes, Contractile Tissues, Reflex Action, Oxidation and Reduction, Electrical Changes in Tissues, Hormones, Drugs, and Toxins. At the end of each chapter are references to the literature of the subject, and in addition, towards the end of the work a carefully selected and comprehensive bibliography of over 80 pages. There is also an index to the text and another to the illustrations, of which there are 259. At the end of each chapter is added a summary of the chief points dealt with.

As shown in the chapter on Protoplasm, the most striking characteristic of living organisms is the perpetual state of change which they show. In order to effect changes work must be done, and the capacity of doing work is due to the possession of something which is called energy. This leads the author to the two great laws dealing with changes of energy and to the subject of "energetics" in general. Surface tension and surface energy, at various interfaces, and adsorption are treated very fully, and this chapter closes with notes on dyeing and staining as applied to fabrics and a discourse on histological methods. The colloid state and the extension of our knowledge of this state by the use of the ultra-microscope is admirably expounded. Emulsoids, gels, electrolytes, and complex colloidal systems lead the reader on

to Permeability of Membranes and the Properties of the Surface of Cells. The surface membrane of cells seems to be impermeable both to colloids and to the majority of crystalloids. After dealing with narcosis, hæmolysis, and secretion in this relation, the nerve synapse is considered and the conclusion is reached that the cell membrane is a modifiable part of the cell system. The importance of osmotic pressure—seeing that living cells are surrounded by a semi-permeable membrane—is obvious, but there are important differences between animal and vegetable cells in this respect. Perhaps one of the subjects in which the average student of physiology takes far too little interest is that of electrolytes and their actions, and the whole questions of ions. If anxious to learn he will find an admirable exposition of these questions in Chapter VII. Over 50 pages are given to Nutrition. The subject is treated in a broad sense, and deals with vegetable and animal nutrition, not forgetting the nitrogen cycle, root tubercles of Leguminosæ and their micro-organisms, diseases produced by the absence of some specific substance. The newer views of the amino constitution of proteins are discussed, and so is the metabolism of carbohydrates and fats, and the chapter ends with an exposition of Mendelism and Symbiosis. With Catalysis and Enzymes the author finds himself on familiar but important ground. The résumé of the recondite facts is at once comprehensive, sufficient, and masterly. In dealing with Secretion special instances are taken, and the chief attention is given to those points of most general application. Digestion is dealt with in 14 pages. A quick transition leads to Excitation and Inhibition, a most valuable chapter on obscure phenomena in nerve, muscle, and other excitable tissues, including plants. The author writes with first-hand knowledge on inhibition, a most interesting account. The contractile tissues are dealt with shortly but adequately. There is an elegant well-illustrated chapter on the Action of Light. Oxidation and Reduction lead to Respiration, including the chief early investigations of the subject. Oddly enough, Electrical Changes in Tissues is sandwiched between Respiration and Circulation of the Blood. Nearly 30 pages are devoted to Hormones, Drugs, and Toxins, which conclude the text.

The illustrations are a special feature of the book, for in addition to the ordinary figures, such as curves, histological details, and so on, there is introduced a large number of portraits of some of those who have materially contributed to the advancement of physiology, including its ancillary sciences. Most of the portraits are those of investigators who long ago have joined the majority, but there are also a few illustrations of living physiologists, physicists, and chemists, including Sherrington, Arrhenius, Emil Fischer, Ostwald, Pavlov, and others. Amongst historic personalities are portraits of Bernard, with seven of his famous assistants, only two of whom—d'Arsonval and Dastre—still survive.

This work is a most interesting, erudite, and comprehensive treatise on general physiology. Moreover, the style of the author, his literary and artistic tastes are displayed in the text and make many dry facts both palatable and easy of assimilation, while the illustrations, pictorial and histological, add to the charm of an altogether successful account of "The Principles of General Physiology."

Fibrositis.

By LL. JONES LLEWELLYN, M.B. Lond., and A. BASSETT JONES, M.B. Lond. London: William Heinemann. 1915. Pp. 693. Price 25s. net.

IT requires some courage on the part of the reader to face a volume of the size of the present work upon a subject which has in the past proved so fruitful in speculation and hypothesis, and on the whole so barren in accurate knowledge. It must be acknowledged that when the plunge has once been made the progress is unexpectedly easy. It is so because the authors are not only definite as to their scheme, but have a literary facility and grace of expression which are often much to seek in medical books. Their scheme involves a considerable amount of repetition, and we find this fault at once while expressing the hope that in future editions they may be able to see their way to compression and excision of some of the redundant matter. That said, we have nothing but praise for the method in which they have set forth their theme and for the thoroughness with which they have attacked the problems under consideration.

"Fibrositis" is the term which the authors have adopted for the group of diseases comprised in the more usual name "chronic rheumatism," and is justified by the observation that the underlying morbid change in the tissues in all the different manifestations of the disease is an inflammatory hyperplasia of the white connective tissue. In their introductory chapter the authors are careful to state exactly what they include in this category; and it may be briefly summarised by stating that they divide the manifestations into the articular the muscular, and the neuralgic varieties; that the undifferentiated forms of infective arthritis are the only types included in the articular group; and that they refer to separate sections the consideration of the morbid conditions which they hold are primarily due to traumatic or static causes.

Next to the general arrangement of their subject-matter in interest is the result of their especial experience in the group of diseases of which they treat. Their observations with regard to the age, occupations, sex, and predisposing causes are full of interest. For example, they believe that the notorious fact that "rheumatic" persons suffer more especially in damp and cold weather is to be attributed rather to alterations in the barometric pressure than to the wet or to exposure. Following the section which deals with the more general aspects of their subject come chapters which take in order articular, muscular, and neuro-fibrositis, the last being almost entirely occupied with the consideration of sciatica and lumbago. Then come several chapters dealing with treatment fully and elaborately, and the last 150 pages of the volume are devoted to traumatic and static fibrositis.

In their treatment of some of the controversial points the authors seem to us to devote undue space to combating hypotheses which have long ceased to find acceptance in the teaching of the medical schools. It has surely, for example, been long recognised that the probable cause of "chronic rheumatism" is bacterial, and the lengthy argument on this point might with advantage have been shortened.

The volume is well printed and illustrated with some good coloured prints and photographs. It is a thorough and searching study of one of the most difficult spheres of clinical medicine.